



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/553,547

08/04/2006

Roberto Valli

02792

6025

987 7590 07/23/2009

SALTER & MICHAELSON
THE HERITAGE BUILDING
321 SOUTH MAIN STREET
PROVIDENCE, RI 029037128

EXAMINER

MILLIKIN, ANDREW R

ART UNIT

PAPER NUMBER

2832

MAIL DATE

DELIVERY MODE

07/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,547	Applicant(s) VALLI ET AL.	
	Examiner ANDREW R. MILLIKIN	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,6-8 and 13-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3,6-8,13-18 and 23-26 is/are allowed.
- 6) ☒ Claim(s) 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Nozaki et al. (U.S. Patent No. 5,247,129, hereafter '129).

3. Claim 19: '129 teaches a pianoforte instrument that includes a vibrating sound board and a plurality of keys (Fig. 1), comprising: individual sensors associated with each key (7a-g) for delivering the actuation information of the actuated key to a tone control device (7ho); a tone control device (7ho) receiving the data of the individual keys actuated to, in turn, select from a memory device the memorized data of the individual harmonics for the corresponding tone actuated (7hp); a memory device for compiling data corresponding to a desired sound characteristic including a partial tone spectrum for each selected tone in dependence on the measured values of each sensor (7he); and a tone modification device coupled from the tone control device for controlling the composition of the partial tone spectrum (7hf); a control module (7ho) for controlling the tone modification device so that a tone building process may be individually selected and combined in order to be delivered in real time to the vibrating sound board and also to control an amplifier (7hg) with respect to the volume of vibrating energy to be

Art Unit: 2832

delivered into the vibrating sound board; and an amplifier (7hg) amplifying the signals received from the tone modification device in order to deliver the amplified signal to the vibrating sound board.

4. Claim 20: '129 teaches that the memory device includes a tone sample memory (7hp), the tone control device receiving the key actuation signals from the sensors and using the sensor data signal to address data from the tone sample memory, the tone sample memory output representing selected harmonics that are generated in real time (Figs. 3-5).

5. Claim 21: '129 teaches that signals issuing from the amplifier are converted into mechanical vibrations and introduced into the vibrating sound board (7i).

6. Claim 22: '129 teaches a device for delivering vibration energy comprising one or more driver systems (7hh) at the vibrating sound board (7i).

Allowable Subject Matter

7. Claims 2, 3, 6-8, 13-18, & 23-26 are allowed.

Response to Arguments

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW R. MILLIKIN whose telephone number is (571)270-1265. The examiner can normally be reached on M-R 7:30-5 and 7:30-4 Alternating Fridays (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew R. Millikin/
Examiner, Art Unit 2832

/Jeffrey Donels/
Primary Examiner, Art Unit 2832